Abstract

In a fuel cell the reaction area of the cell (bipolar plate) is divided. For startup, only a partial area of the bipolar plate is supplied with the reactants via separate inlet and outlet ports. This partial area thus heats up relatively rapidly due to its reduced size, and the resulting reaction heat may be transferred to adjacent reaction areas and/or used for heating. After reaching the operating temperature in these areas, the reactants may also flow over the adjacent reaction areas until achieving the full operating power of the fuel cell.